



THE INSTITUTION OF ENGINEERS, MALAYSIA

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Civil & Structural Engineering Technical Division

TALK

Achieving Sustainable Concrete Infrastructure - A Reality Check

2 BEM Approved CPD/ PDP Hours

Ref No: IEM16/HQ/343/T

Date 16 August 2016 (Tuesday)

Time 5.30 p.m. – 7.30 p.m.

Venue Auditorium Tan Sri Prof. Chin Fung Kee,
3rd Floor, Wisma IEM, PJ

Speaker Professor Steve Garrity,
*BSc(Hons), MSc, PhD, CEng, MICE, FStructE,
FCIHT, FIMS*
University of Leeds, Leeds, UK

SYNOPSIS

Although many civil and structural engineers now place sustainability at the heart of what they do, to many “sustainability” is a rather abstract term. As a result, the speaker believes that many engineers do not place enough (or any?) emphasis on sustainability in their everyday work.

This talk attempts to de-mystify the term sustainability with particular reference to concrete infrastructure and the low carbon economy. Specific reference is made to the reduction in carbon use in the construction, operation, maintenance and demolition (or should that be reuse?) of our concrete infrastructure and how this not only reduces the impact on the environment but also reduces cost. Although there is, rightly, much emphasis on the development of innovative low carbon materials, products and systems, a great deal of carbon can be saved by avoiding the need to repair, strengthen, demolish and/or reconstruct our infrastructure. Enhancing the quality, reliability, resilience, robustness and durability are, therefore, key performance indicators relating to all forms of sustainable infrastructure. It follows that these key performance indicators must be at the forefront of the development of any innovative, commercially viable materials, products or systems that are claimed to be low carbon or sustainable. Perhaps more importantly, quality, reliability, resilience, robustness and durability also need to be at the heart of our decisions relating to the design, construction, maintenance and operation of EVERYTHING that is entrusted to our care and expertise? These so-called “key performance indicators” are by no means new! Indeed, one of the main aims of this talk is to remind everyone that what we should’ve been doing throughout our careers is as important as it ever was! This is particularly pertinent given the comparatively poor in-service performance of some of our concrete structures. Suggestions are made on how this might be addressed starting with the education and training of the engineers of the future.

ANNOUNCEMENTS

Pre-registration is not required.

IEM members will be given preferential admission.

No registration fee for affiliate members but membership card must be presented.

For the list of affiliates, please refer to

www.myiem.org.my/content/memorandum_of_understanding-469.aspx.

Non-members will be charged registration fee of RM50 and administrative fee (see below).

Members who fail to produce their membership cards will be charged a fee of RM25.

IEM BUILDING FUND (WISMA IEM)

Administration fee of RM15 is chargeable to all participants except student members.

This fee contributes towards IEM building fund.

Any further contribution towards this fund will be deeply appreciated by IEM.

CPD HOURS CONFIRMATION

Name

Membership No

Signature

BIODATA OF SPEAKER



Professor Steve Garrity,
BSc(Hons), MSc, PhD, CEng, MICE, FStructE, FCIHT, FIMS
University of Leeds, Leeds, UK

Professor Steve Garrity is a chartered engineer with over 35 years experience in the planning, design, supervision of construction and repair or strengthening of a variety of civil and structural engineering works. He gained much of this experience with consulting engineers and the bridge engineering department of a major UK public highway authority. Steve has also spent part of his career as an academic. He was the Head of the Department of Civil and Environmental Engineering at the University of Bradford, UK (1997 - 2002) where he later served as a Civil Engineering Consultant and Visiting Professor in Civil Engineering Design. He is currently the Hoffman Wood Professor of Architectural Engineering at the University of Leeds, UK. His current academic work includes teaching at undergraduate and postgraduate levels and research into the performance of concrete and masonry structures. Since 2002 he has also been the principal of Garrity Associates, an independent firm of consulting civil and structural engineers and educational consultants. He has provided training and CPD courses for a wide range of construction professionals and has designed various new structures and repair or strengthening works for a variety of clients including government departments, local authorities, consulting engineers and design and build contractors. Most of his recent work has been associated with the repair or strengthening of concrete and masonry structures.

Steve is the recipient of the Chartered Institution of Highways and Transportation Babbie Premium Award (1992) and the Institution of Structural Engineers Cass Hayward Prize (1993), Sir Arnold Waters Medal (1995) and the Lewis Kent Award (2004). He was the co-recipient of the Institution of Civil Engineers Historic Bridge and Infrastructure Awards in 2004 (winner) and 2009 (commendation). He also serves on various learned society and professional body committees for the ICE, IStructE and HKIE, and from 2013-15 was President of the International Masonry Society.

Ir. Dr. Ng Soon Ching

Chairman

Civil & Structural Engineering Technical Division, IEM

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